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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shingo Kataoka

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Patrick G. Burns, Esq.  
GREER, BURNS & CRAIN, LTD.  
Suite 2500  
300 South Wacker Dr.  
Chicago, IL 60606

EXAMINER

SEFER, AHMED N

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/903,010

Applicant(s)

KATAOKA ET AL.

Examiner

A. Sefer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24-38, 73 and 74 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 24-38, 73 and 74 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/30/2005 has been entered.

### *Specification*

2. Claim 33 is objected to because of the following informalities: The recitation calling for "... at intervals of a period begin same" should read, "... at intervals of a period being same". Appropriate correction is required.

### *Drawings*

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first connector substantially parallel to a direction in which a capacitance electrode extends and a second connector which extends in a direction other than the direction of the capacitance electrode must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

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even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 24-38, 73 and 74 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The application as originally filed does not specifically support the claim limitation

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“first connector substantially parallel to a direction in which a capacitance electrode extends and a second connector which extends in a direction other than the direction of the capacitance electrode.”

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 26 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 26 and 35 recite the limitation "... said connector..." There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

10. Claims 24-34, 36, 37 and 74, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Takeda et al. ("Takeda") USPN 6,724,452.

Takeda discloses (see figs. 9, 44-46, 51-53, 63, 217 and 221) liquid crystal display device comprising: a first substrate 17/92; a second substrate 16/91 facing said first substrate; a liquid crystal layer sealed between said first substrate and said second substrate; a first electrode 13 formed on said first substrate; a second electrode 12 formed said second substrate; a first molecule orientation film formed on said first substrate so as to cover said first electrode; a second molecule orientation film formed on said second substrate so as to cover said second electrode(col. 87, lines 22-30); a first polarizing plate 15 arranged outside of said first substrate; and a second polarizing plate 11 arranged outside of said second substrate in a crossed Nicol state (col. 57, lines 44-48) to said first polarizing plate, wherein: in a non-driving state in which a driving voltage is not applied between said first electrode and said second electrode, liquid crystal molecules are oriented in a vertical direction to said first substrate and said second substrate by said first molecule orientation film and said second molecule orientation film, respectively; on said first electrode, fine pitch electrode 20/365 (col. 46, lines 9-11 and col. 68, lines 1-4), which extend in a first direction parallel to a surface of said liquid crystal layer, are periodically repeated to be arranged at intervals of a first width in a second direction, which said second direction is parallel to the surface of said liquid crystal layer and is vertical to said first direction; said electrode patterns, which are repeated to be arranged in said second direction, are mutually connected each other by a first connector substantially parallel to a direction in which a capacitance electrode 35 extends and a second connector which extends in a direction other than the direction of the capacitance electrode (unnumbered vertical layers interconnecting electrode patterns 20C shown in figs. 51 and 52) on said first electrode, a cutout pattern 21 extending in said second direction is formed at substantially a greater second width than said first width; and

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said liquid crystal molecules substantially tilt in said first direction in a driving state on and among said electrode patterns on said first electrode.

As for claim 25, Takeda discloses (fig. 44) each of said electrode patterns 20 is spaced from another electrode pattern adjacent and corresponding thereto in said first direction, by said cutout pattern 21.

As for claims 26 and 33, Takeda discloses (figs. 58, 72 and 73) on said second substrate, rough patterns 20A made up of convex patterns (as in claim 33) extending in a second direction being formed so as to cross electrode patterns 20B at a view from a vertical direction to a first substrate, and said electrode patterns adjacent to and corresponding to other electrode patterns 32 in said second direction and at least a part of said connector 52 are arranged under said rough patterns at said view from said vertical direction to said first substrate.

As for claim 27, Takeda discloses (fig. 55) at least a part of said electrode patterns further mutually connects along an edge of an opening part of a pixel electrode 13.

As for claim 28, Takeda et al disclose (fig. 55) each of said electrode patterns has a tapered shape in said first direction.

As for claim 29, Takeda discloses (fig. 55) each of said electrode patterns has a shape which width becomes narrower toward a top edge in a step-wise shape.

As for claim 30, Takeda discloses (figs. 78-81) third electrode patterns 35 are formed so as to extend along said cutout patterns at a same electric potential as said second electrode under said first electrode.

As for claim 31, Takeda discloses (figs. 55 and 78-81) on said first electrode, a first region and a second region are formed so that said first direction in said first region vertically

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crosses said first direction in said second region; and said third electrode 35 extends along said first region and the second region on said first substrate.

As for claims 32, Takeda discloses (figs. 58, 72 and 73) rough patterns comprising repeated patterns in said first direction, in which said repeated patterns are repeated in said second direction at intervals of a period begin same as or equal to a repeat period in said second direction of said electrode patterns.

As for claim 34, Takeda discloses (figs. 55 and 78) a first electrode comprising a first region where said electrode patterns are repeated and a second region which is covered with a uniform conducting film.

As for claims 36 and 37, the specification contains no disclosure of either the critical nature of the claimed arrangement or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

As for claim 74, Takeda discloses (fig. 71) a thin film transistor 33 formed so as to correspond to each pixel electrodes and drives each of said pixel electrodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS  
January 20, 2006

NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

